Experiencing the Life Quality of Our Soils.

Welcome to the Biodynamic Research Group. We are an ad hoc group of gardeners, farmers, and scientists interested in research on biodynamics. Whether you are a farmer or a gardener, we invite you to participate in our first common research project in 2020. The project involves you and your soil.

Objectives.

The first objective of the project is to understand the mysterious life quality of the soil and how it manifests through time. The second objective is for you to build your capacity to observe and do this research.

What the results will do.

If you participate and inform us of your results it will help all of us to look for commonality in experience, and also look for ways to improve how we farm and garden. You can interact with us and others with your findings and questions by using the group forum we have formed. If there is sufficient work done by all participants we hope to have a collaborative session at the Biodynamic Association's annual meeting in Colorado. There it may be possible to present your results in the form of a poster or showing soil samples and pictures and to learn from your experiences and the experiences of others.

Method for assessing soil quality focusing on your qualitative experiences.

If you work with us, we ask that you pursue the exercise the specific methodology described below. Following this method *is critical for you and for others to get the most out of this work.*

How to do the sampling.

Field/garden bed and soil choice: Choose a field or garden bed that you know the history of and will have access to through the growing season into next year. The sample should be taken from the same site every time and should be taken on a monthly, or at least bi-monthly basis, starting in the spring, taking a pause in the winter for frozen ground, and ending with sampling early the next spring. Ideally it will be a uniformly managed site where you are growing a heavy feeding crop.

Tools: A shovel that will get you down to 8 inches deep; a notebook, a camera, and a bucket. Appropriate clothing for the weather conditions.



Dig a soil sample by taking a shovel and digging out $12 \ge 12 \ge 8$ inch sample of soil out of your garden or farm field. You may take and examine replicate soil samples each date from the field to see if there is variation in the soil quality experience from sample to sample.



You should dig by inserting the shovel around the sample on all four corners and gently lifting the soil out so as to preserve it in as intact a form as possible.



After the soil block is extracted you may work your way into it by opening up the sample by breaking off clods and observing them.



Observations:

We ask that each month you pay attention to the form and dynamic of the soil and its inner quality or feel. You will need to obtain and write down a one to two-page description of your experiences of the soil each time you observe it. If possible, you can photograph the soil or its parts and keep a subsample in a bucket for drying and further reference. Remember to write down specific background information about the date of sampling, the type of soil (if you know it), the predominant weather conditions affecting the soil over the past month, and the previous history of the soil in terms of management including rotation and fertility inputs and the use of biodynamic preparations.

Absolutely crucial for this exercise is that you make sure that the content you entertain is based on what arises in you from the soil in your immediate experience with it. Knowledge about soils from before should only be used to clothe the immediate content before you in the object of attention. Speculation should be strongly limited and attention should be paid to the fact that the soil is the final authority for understanding it. The intent is to grow inner experiences and capacities by selflessly paying attention to it and marrying soil with soul. We ask for you to abstain from referring to information from externally thought out tests such as soil quality lab testing or dowsing while doing the exercise. Quality speaks not just to our ability to conceptualize but also to our feelings and deeper levels of what it means to be alive. We must gain the capacity for magnifying and obtaining clarity for what soil quality speaks to us on those levels.

Each time you observe the soil, three aspects of the exercise will be apparent and need to be described.

1) **Outer appearances.** Please jot down an analysis of the outer aspects of the soil. This means a quick external description of the soil including the organisms in it. What does it look like? Hints for directions for perceiving might include: crumbs, overall architecture and structure, smell, worms, roots, etc. What do you experience when you break the soil apart into its clods and crumbs?

2) Inner qualities. Now please describe the inner experienced quality of the soil associated with its form, substance, composition, and smell.

The most important thing is to pay attention to the impressions that the soil makes directly on you, some of which may be apparent on hindsight. You should focus on those impressions and try to identify what they are and how they speak to you as an organism and a human being.



Hints include paying attention to different directions of the overall experience. Quality may speak to us in ways that cannot be quantified so do not be afraid of fostering poetic but accurate descriptive impressions. For example, if apparent to you, you may choose to explore your sense in the soil of: earthiness, wateriness, availability and visibility of inner spaces and forms, animality, formative powers or qualities, and of the roots, which will of necessity, penetrate the soil.

Please describe what you sense of inner qualities. This might include experiences of powerfulness, vitality, fertility, and potential, that are associated with the soil. Or on the other hand of gravity, density, compaction, minerality, and sense of decay associated with organic materials.

The overall goal is to achieve a practical awareness in yourself of the balance of these qualities in the actual soil before you. The idea is that your assessment of where the soil "is" at each sampling time is based purely on your experience. We attach an example with photos showing how to do the sampling and an example description of the impressions made on one of us from their soil this spring.

3) Memory and reviewing feelings. Review your experiences over time. What is your impression is of how the soil has changed between examinations? Once again, refrain from lots of externally derived explanations but stick with what is experienced.

Example of a recording of soil quality work.

2020 site: Goldstein Garden southern half.

History: McHenry silt loam in history of vegetable and corn production since 1994. **Previous cropping**: 2017 corn, 2018 vegetables, 2019 weeds. Manured with sheep and cow manure in 2017 and 2018 at 10-20 tons/acre. The garden soil has been treated with horn manure and compound preparation on a yearly basis combined with intermittent use of silica sprays on crops. **Weather:** normal spring with lots of rain and occasional warm periods.

April 9, 2020 observations and inner impressions. The soil was well crumbled on the top 4 inches. Below that there were larger areas with compacted structure. The soil is beginning to be permeated with roots from small weeds and small active earthworms are present. The overall sense was that the soil seemed rested, vital. The soil breaks apart and crumbles easily with the hand.

Additional poetic impressions/recognitions were:

- being able to identify with the rested quality and potency/power in the soil like how I feel after a vacation and lots of good sleep.
- The sense of the roots permeating the soil with a kind of willing curiosity.
- An intelligent brain like sense to the aggregated surface with the roots growing through the intelligent crumbled matter.

- A feeling of immense powers from the depths that are now in the soil sample. These powers are quite different from what lives in the aggregated top of the soil, but they permeate the whole.
- A mustard-family like smell probably associated with the roots of the weeds.
- A sense that the soil is the home of a whole world of creatures that live in it that I do not generally consider but live there anyway.

Testing your soils for their physical and chemical characteristics.

The main point of this exercise is to focus your efforts on gaining genuine impressions of the life in your soils through the growing season. In case you want to do additional research on your soil's type and history and on its physical, chemical and biological composition, we created a group discussion site which will give you helpful tips for simple soil tests you might be interested in trying and who to contact for help. Doing such tests in parallel with soil observations may help you better understand how soil life and soil physical, chemical and biological properties are intertwined.

Register for participating so we know who we are:

Would you like to participate in the "Experiencing the Life Quality of Our Soils" shared project? Please let us know by filling out <u>THIS FORM</u>. The information you provide in the form will be sent to the Biodynamic Research Group. We will then send you an invitation to join the project's discussion group where you can connect with other participants and share your soil's stories with others.

We look forward to your participation in this experiment with us.

For the Biodynamic Research Group Steering Committee

Walter Goldstein, Mike Biltonen, Patricia Frazier, Ryan Herring, Barry Lia, Stewart Lundy, Dewane Morgan, Guy McCarthy.